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(71)Applicant: MEIDENSHA CORP

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(72)Inventor: NAGAYAMA KAZUTOSHI

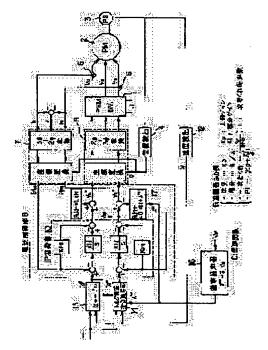
ASHIKAGA TADASHI

## (54) CONTROLLER FOR ELECTRIC ROTARY MACHINE

## (57) Abstract:

PROBLEM TO BE SOLVED: To control an electric rotary machine so as to obtain an output accurately corresponding to the command even though the temperature rises, by calculating an estimated value of interlinked magnetic flux by present permanent magnet from a deviation value between a torque current command and a torque current detection value and by calculating and outputting a torque current command from a torque command, frequency and estimated value of magnetic flux.

SOLUTION: A magnetic flux estimator 16 calculates magnetic flux estimated value  $\lambda**$  multiplying output Vip of an IP control section 10 by transmission coefficient G.  $\lambda**$  is supplied to a torque current command arithmetic section 14 and a torque voltage supply section 17 each. At the torque current command arithmetic section 14, a torque current command Iq\* is determined based on the magnetic flux estimated value  $\lambda**$  and this is supplied to the current control section 8. This torque current command Iq\*\* reflects the interlinked magnetic flux  $\lambda$  of a real permanent magnet, and a command accurately responding to the torque command T\* can be produced. In this way, a demagnetized



portion due to the temperature of permanent magnet is compensated and the accurate control corresponding to the torque command T\* becomes possible.

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